SAFETY DATA SHEET

Date of issue/Date of revision 20 December 2023

Version7.02

Section 1. Identification

: 00145472
: SIGMACOVER 456 BASE RAL 1018
: Not applicable.
: Mixture.
: Liquid.
of the substance or mixture and uses advised against
 Coating. Professional applications, Used by spraying.
: Product is not intended, labelled or packaged for consumer use.
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: CHEMTREC +(84)-444581938 (CCN 17704)

Section 2. Hazards identification

	Viet Nam Page: 1/13
Signal word	: Warning
GHS label elements Hazard pictograms	
	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 66.2%
	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 58.4%
	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 27.4%
	AQUATIC TOXICITY (ACUTE) - Category 3 AQUATIC TOXICITY (CHRONIC) - Category 3
	irritation) - Category 3
	SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract
	EYE IRRITATION - Category 2A
	ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2
substance or mixture	ACUTE TOXICITY (dermal) - Category 5

Product code 00145472

Product name SIGMACOVER 456 BASE RAL 1018

Section 2. Hazards identification

Hazard statements	:	Flammable liquid and vapor. May be harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
Precautionary statements		
Prevention	:	Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Response	:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
Storage	1	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Routes of entry		Not available.
Other hazards which do not result in classification	:	Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

CAS number/other identifiers

CAS number: Not applicable.EC number: Mixture.			
Ingredient name	CAS number	Chemical formula	%
Epoxy Resin	SUB110652	-	≥10 - ≤25
barium sulfate	7727-43-7	O4-S.Ba	≥10 - ≤25
xylene	1330-20-7	C8-H10	≥10 - ≤20
Epoxy resin (MW \leq 700)	25068-38-6	(C15-H16-O2.	≤9.4
		C3-H5-Cl-O)x	
ethylbenzene	100-41-4	C8-H10	≤3.6
2-methylpropan-1-ol	78-83-1	C4-H10-O	≤1.5

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SUB codes represent substances without registered CAS Numbers.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary fir	st aid measures
Eye contact	: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
Inhalation	: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Skin contact	: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion	: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
Most important symptoms/e	ffects, acute and delayed
Potential acute health effe	<u>ts</u>
Eye contact	: Causes serious eye irritation.
Inhalation	: Harmful if inhaled. May cause respiratory irritation.
Skin contact	: May be harmful in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	: No known significant effects or critical hazards.
Over-exposure signs/symp	<u>toms</u>
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	: No specific data.
Indication of immediate me	lical attention and special treatment needed, if necessary
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it

is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon oxides sulfur oxides halogenated compounds metal oxide/oxides
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	 Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and
explosion-proof equipment. Dilute with water and mop up if water-soluble.
Alternatively, or if water-insoluble, absorb with an inert dry material and place in an
appropriate waste disposal container. Dispose of via a licensed waste disposal
contractor.

Section 6. Accidental release measures

Large spill
 Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling	
Protective measures	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
parium sulfate	ACGIH TLV (United States, 1/2023). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction
xylene	Ministry of Health (Viet Nam, 6/2019). [xylene] STEL: 300 mg/m ³ 15 minutes. TWA: 100 mg/m ³ 8 hours.
ethylbenzene	ACGIH TLV (United States, 1/2023).

Section 8. Exposure controls/personal protection

2-methylpropan-1-ol			Ototoxicant. TWA: 20 ppm 8 hours. Ministry of Health (Viet Nam, 6/2019). [butanols] STEL: 250 mg/m ³ 15 minutes. TWA: 150 mg/m ³ 8 hours.
Recommended monitoring procedures	:		riate monitoring standards. Reference to nods for the determination of hazardous
Appropriate engineering controls	:	contaminants below any recommende	ls to keep worker exposure to airborne ed or statutory limits. The engineering controls concentrations below any lower explosive
Environmental exposure controls	:		
Individual protection measu	<u>res</u>		
Hygiene measures	:	eating, smoking and using the lavator Appropriate techniques should be use Contaminated work clothing should no	bughly after handling chemical products, before y and at the end of the working period. In the remove potentially contaminated clothing. In the allowed out of the workplace. Wash Ensure that eyewash stations and safety ocation.
Eye/face protection	:	Chemical splash goggles.	
Skin protection			
Hand protection	:	be worn at all times when handling ch this is necessary. Considering the par check during use that the gloves are s should be noted that the time to break different for different glove manufacture	s complying with an approved standard should emical products if a risk assessment indicates rameters specified by the glove manufacturer, still retaining their protective properties. It through for any glove material may be rers. In the case of mixtures, consisting of the of the gloves cannot be accurately
Gloves	:	butyl rubber	
Body protection	:	being performed and the risks involve	
Other skin protection	:		nal skin protection measures should be formed and the risks involved and should be ing this product.
Respiratory protection	:	hazards of the product and the safe w workers are exposed to concentration appropriate, certified respirators. Use	n known or anticipated exposure levels, the rorking limits of the selected respirator. If is above the exposure limit, they must use a properly fitted, air-purifying or air-fed d standard if a risk assessment indicates this is

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid.
Color	:	Various
Odor	:	Aromatic.
Odor threshold	:	Not available.
рН	:	Not applicable.
Melting point	:	Not available.
Boiling point	:	>37.78°C (>100°F)
Flash point	1	Closed cup: 27.5°C (81.5°F)
Evaporation rate	1	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	1	Greatest known range: Lower: 1.7% Upper: 10.9% (2-methylpropan-1-ol)
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	1.4
Solubility(ies)		Media Result
oolubility(les)	1	cold water Not soluble
Partition coefficient: n- octanol/water	:	Not applicable.
Auto-ignition temperature	:	430°C (806°F)
Decomposition temperature	:	Not available.
Viscosity	1	Kinematic (room temperature): >400 mm²/s Kinematic (40°C): >21 mm²/s
Viscosity	:	60 - 100 s (ISO 6mm)

Viscosity

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials	:	Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	:	Depending on conditions, decomposition products may include the following materials: carbon oxides sulfur oxides halogenated compounds metal oxide/ oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
barium sulfate	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
Epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	>2 g/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapor	Rat	24.6 mg/l	4 hours
	LD50 Dermal	Rabbit	2460 mg/kg	-
	LD50 Oral	Rat	2830 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
x ylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Epoxy resin (MW ≤ 700)	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	-	-	-

Conclusion/Summary

:	There are no data available on the mixture itself.
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: There are no data available on the mixture itself.

: There are no data available on the mixture itself.

Respiratory Sensitization

Skin

Eyes

Product/ingredient name	Route of exposure	Species	Result
Epoxy resin (MW ≤ 700)	skin	Mouse	Sensitizing
Skin Respiratory <u>Mutagenicity</u> Conclusion/Summary <u>Carcinogenicity</u> Conclusion/Summary	: There are no da	ata available on the mixture itse ata available on the mixture itse ata available on the mixture itse ata available on the mixture itse	lf.
Reproductive toxicity Conclusion/Summary Teratogenicity Conclusion/Summary Specific target organ toxicit	: There are no da	ata available on the mixture itse ata available on the mixture itse <u>e)</u>	

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

<u>Specific target organ toxicity (repeated exposure)</u>

Name		Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

Name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 2

Information on the likely : Not available. routes of exposure

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Harmful if inhaled. May cause respiratory irritation.
Skin contact	: May be harmful in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure Short term exposure Potential immediate : There are no data available on the mixture itself. effects Potential delayed effects : There are no data available on the mixture itself. Long term exposure

Section 11. Toxicological information

Potential immediate effects	1	There are no data available on the mixture itself.
Potential delayed effects	:	There are no data available on the mixture itself.
Potential chronic health eff	<u>ect</u>	<u>S</u>
General	:	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/ or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Reproductive toxicity	:	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Øral	9102.9 mg/kg
Dermal	3022.15 mg/kg
Inhalation (vapors)	21.62 mg/l
Inhalation (dusts and mists)	2.78 mg/l

Other information

Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

Section 12. Ecological information

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Toxicity

Product/ingredient name	Result	Species	Exposure
Epoxy resin (MW ≤ 700)	Acute LC50 1.8 mg/l	Daphnia	48 hours
	Chronic NOEC 0.3 mg/l	Daphnia	21 days
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	-
2-methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours

Persistence and degradability

Product/ingredient name	Test	Result		Dose		Inoculum
Epoxy resin (MW ≤ 700) ethylbenzene	OECD 301F -	5 % - 28 da 79 % - Rea	ys dily - 10 days	-		-
Product/ingredient name	Aquatic half-life		Photolysis		Biodeg	radability
xylene Epoxy resin (MW ≤ 700) ethylbenzene	- - -		- -		Readily Not rea Readily	dily

Bioaccumulative potential

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Section 12. Ecological information

Product/ingredient name	LogPow	BCF	Potential
x ylene	3.12	7.4 to 18.5	Low
Epoxy resin (MW ≤ 700)	3	31	Low
ethylbenzene	3.6	79.43	Low
2-methylpropan-1-ol	1	-	Low

<u>Mobility in soil</u>

Soil/water partition : coefficient (K_{oc})

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

: The generation of waste should be avoided or minimized wherever possible. **Disposal methods** Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	ΙΑΤΑ
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

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ΙΑΤΑ	: None identified.
IMDG	: This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.
UN	: This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.1.

Product code 00145472 Product name SIGMACOVER 456 BASE RAL 1018

Section 14. Transport information

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not applicable. to IMO instruments

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

Circular no. 05/1999/TT-BYT

Ingredient name	Category	Notes
benzene toluene xylene	Category 1 Category 2 Category 2	

Toxic classification (TCVN : 4

3164-79)

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 16. Other information

<u>History</u>	
Date of issue/Date of revision	: 20 December 2023
Date of previous issue	: 8/9/2023
Version	: 7.02
Prepared by	: EHS
Key to abbreviations	 ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	: Not available.

✓ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.